

REMARKS

In the Office Action dated October 8, 2008, claims 83-108 were considered. The Action rejected claims 83-108 under 35 U.S.C. § 112, first paragraph; 35 U.S.C. § 112, second paragraph; 35 U.S.C. § 103(a); and non-statutory double patenting. In the present amendment, claim 83 has been amended. Claims 83-108 are pending.

Rejections Under 35 U.S.C. § 112 First Paragraph

The Office Action rejected claims 83-108 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Office Action states that Applicants' supporting disclosure lacks a showing of possession of (1) ranges of amounts of blown vegetable oils used and (2) ranges of amounts for the respective A-side and B-side component parts (Office Action, p. 2).

Applicants respectfully submit that the application discloses (1) ranges of amounts of blown vegetable oils used and (2) ranges of amounts for the respective A-side and B-side component parts. Specifically, with respect to ranges of amounts of blown vegetable oils used, Applicants respectfully submit that support for amended claim 83 ("from 70% by weight to 98.8% by weight of the mixture and wherein the blown vegetable oil comprises a blown vegetable oil chosen from the group consisting of a blown palm oil, a blown safflower oil, a blown canola oil, a blown soy oil, a blown cottonseed oil, and a blown rapeseed oil") is found in various Examples. Applicants believe that the support from the Examples detailed below demonstrate Applicant's possession of the presently claimed range in Claim 83.

Example	Percentage
3	92.5
4	85
5	70
9	85
10	80
11	80
12	73
13	85
14	85

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Example	Percentage
15	95.2
17	96
19	76.9
25	78
26	88
27	97
34	89
41	78
44	90.9
48	81
50	83
53	98
61	90.9
63	90
65	94
68	95
73	98
75	86.5
81	87
84	85
87	86.9
90	96.7
93	80
95	75.9
101	86.9
105	86.9
108	93.3
123	94.6
124	92
127	95.7
128	95.9
129	98.8
130	98.8
131	76.4
132	76.4
133	83
134	97.4

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Example	Percentage
135	97
136	98.5

Similarly, Applicants respectfully submit that the Examples in the present application, as shown below, provide support for presently pending claim 101, which claims a range of from 52% to 96% by weight.

Example	Percentage
3	92.5
4	85
5	70
6	52
9	85
10	80
11	80
12	73
13	85
14	85
15	95.2
17	96
19	76.9
25	78
26	88
34	89
41	78
44	90.9
48	81
50	83
61	90.9
63	90
65	94
68	95
75	86.5
81	87
84	85
87	86.9
93	80
95	75.9

Example	Percentage
101	86.9
105	86.9
108	93.3
123	94.6
124	92
127	95.7
128	95.9
131	76.4
132	76.4
133	83

With respect to ranges of amounts for the respective A-side and B-side component parts, Applicants respectfully submit that support for the ranges claimed in claims 84 and 85 may be found in various Examples of the present application. Specifically, Applicants believe that support for claim 84 ("from 31 to 100 parts A-side to 100 parts B-side") may be found at least in Examples 1-5, 7-14, 17-18, 20-22, 24, 28-33, 35, 37-38, 40, 42-43, 46, 51-52, 54-55, 58-60, 62, 64, 66-67, 71, and 74 as shown below.

Example	Parts A-side
1	55
2	46
3	61
4	61
5	61
7	38
8	31
9	60
10	40
11	100
12	61
13	80
14	61
17	61
18	61
20	57
21	71
22	45

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Example	Parts A-side
24	57
28	61
29	67
30	90
31	61
32	74
33	55
35	61
37	67
38	67
40	100
42	61
43	61
46	40
51	56
52	54
54	56
55	40
58	41
59	61
60	45
62	61
64	61
66	61
67	61
71	61
74	45

Additionally, Applicants believe that support for claim 85 ("from 61 parts to 100 parts A-side to 100 parts B-side") may be found at least in Examples 3-5, 11-14, 17-18, 21, 28-32, 35, 37-38, 40, 42-43, 59, 62, 64, 66-67, and 71 as shown below.

Example	Parts A-side
3	61
4	61
5	61
11	100
12	61

Example	Parts A-side
13	80
14	61
17	61
18	61
21	71
28	61
29	67
30	90
31	61
32	74
35	61
37	67
38	67
40	100
42	61
43	61
59	61
62	61
64	61
66	61
67	61
71	61

Claims 83-100 were also rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement because Applicants' recitation of urethane in describing its catalyst allegedly lacks support by the originally filed supporting disclosure (Office Action, p. 3).

Applicants respectfully disagree and point the Examiner to the express support for "urethane catalysts" as found in paragraph [0040] of the originally filed supporting disclosure. Applicants respectfully submit that express support for the use of urethane catalysts in the claimed invention is found at least in Examples 1-5, 7-13, 18, 24, 110-112, 115, and 118.

The Office Action further states that claims 83-108 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement stating that Applicants' recitation of ranges of heat values as set forth in the claims (specifically claims

83, 93, 94, 96, 97, and 101) were not supported by the originally filed supporting disclosure (Office Action, p. 3). With regards to the recitation of ranges of heat values as set forth in claims 83, 93, 94, 96, 97, and 101, Applicants have amended the claims to state various temperature ranges. Applicants submit these ranges are supported by the originally filed specifications. Applicants respectfully submit that support for the presently pending claims may be found at least in the following Examples:

Example	Temperature (F)
25	230
26	220
27	202
41	240
48	227
50	250
63	325
65	235
68	200
73	205
91	100
93	212
101	198

The Office Action further states that claims 84 and 85 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement stating that Applicants' recitation of ranges of amounts of transesterified polyol are not supported by the originally filed supporting disclosure (Office Action, p. 4).

Support for claims 84 and 85 is found in the various Examples of the originally filed specification. For Example, in Example 54, the transesterified polyol makes up 27.5% by weight of the B-side. The range of transesterified polyol found in the B-side component part ranges up to 99.6% may be found in Example 98. Other Examples show value within this range, including at least Examples 7-9 (75%, 53.6%, and 93.6%), 80 (97.2%) and 88 (98%). Thus, Applicants respectfully submit that the Examples as specifically detailed in the originally filed disclosure adequately support a range of at least 27.5% to 99.6% transesterified polyol in the B-side component part.

Finally, claims 92 and 93 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement stating that Applicants recited group of esterification catalysts is not supported by the originally filed supporting disclosure (Office Action, p. 5). Applicants have amended dependent claim 92, which claim 93 depends from to claim tetra-2-ethylhexyl titonate. Support for this catalyst is found at least at paragraph [0020] of the originally filed specification. Accordingly, Applicants respectfully submit that the rejection of claims 92 and 93 is moot.

Accordingly, Applicants respectfully contend that the rejections under 35 U.S.C. § 112, first paragraph, should be withdrawn.

Rejection Under 35 U.S.C. § 112, Second Paragraph

The Office Action rejected claims 83-100 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter Applicants regard as the invention. Applicants believe they have amended the claims to address this rejection without narrowing the scope of the claims that are the subject of this rejection. Accordingly, Applicants respectfully contend that the rejection under 35 U.S.C. § 112, second paragraph, should be withdrawn.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 83, 86-91, 94, 97-101 and 106-108 are rejected under 35 U.S.C. §103(a) as being unpatentable over Croft U.S. Patent No. 5,688,860 in view of Grant et al., "Chemical Dictionary" (Office Action, p. 6). More specifically, the Office Action states "Croft discloses polymer materials comprising the reaction of isocyanates, isocyanate reactive material, catalysts, plasticizers, extenders/crosslinkers, and other material of Applicants' claims" (Office Action, p. 6).

Applicants submit that Croft does not disclose (expressly or inherently) or suggest the presently pending claimed inventions. In particular, Applicants' claim recites that the transesterified polyol is produced using an esterification catalyst or by heating the mixture to a temperature of from 198° F to 325° F. Again, Croft does not disclose the use of an

esterification catalyst or heating the mixture. Croft only discloses the use of a catalyst, for catalyzing the urethane reaction or heat for accelerating crosslinking of the urethane reaction. As such, Applicants respectfully submit that contrary to the Examiner's assertions, Croft does not disclose or teach any transesterification at all much less "to the degree defined by the claims." Furthermore, if the Examiner maintains the present rejection in a future Office Action, Applicants kindly request that the Examiner supply a more detailed explanation of precisely how and which components of Croft transesterify so Applicants better understand the basis of this rejection. "The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court, quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), stated that "'[R]ejections on obviousness cannot be sustained be mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.'" MPEP 2141, *KSR* at 1741, 82 USPQ2d at 1396.¹

Applicants also respectfully submit that it would not have been obvious to one having ordinary skill in the art to combine the teachings of Croft with the Grant reference to arrive at the claimed invention. "[When] the prior art teaches away from combining certain known elements, discovery of the successful means of combining them is more likely to be nonobvious." *KSR Int'l Co. v. Teleflex Inc.* 127 S. Ct. 1727, 1740 (2007). Based on Croft's disclosure, Croft teaches away from including a blown oil based upon Grant as asserted by the Examiner. The oil used in Croft is used as a plasticizer. A plasticizer is defined as a "chemical added especially to rubbers and resins to impart flexibility, workability, or stretchability." (see Merriam Webster Dictionary definition attached). Specifically, Croft states that "the plasticizing system is preferably selected so as to be essentially inert with

¹ 37 C.F.R. §1.104(c)(2) states that "When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained in each rejected claim specified."

polyurethane/polyurea reaction products and substantially non-exuding" (Croft, col. 11, lines 45-47). Also, the Croft reference expressly defines the term essentially inert in the Summary of the Invention section, wherein Croft states "the term 'essentially inert' as used herein means that the plasticizer does not become cross-linked into the polyurethane/polyurea reaction product." (Croft, col. 3, lines 38-40) (emphasis added). Thus, if the plasticizer does not become cross-linked into the polyurethane/polyurea reaction product, there is no urethane reaction of the oil of Croft which is used as a plasticizer. Thus, Applicants submit that the Croft reference itself discourages one of ordinary skill in the art from substituting a reactive component for the plasticizer let alone modifying the non-reactive vegetable oil plasticizer of Croft by blowing and replacing the plasticizer that does not become cross-linked with the blown vegetable oils that do contain become cross-linked. Moreover, Grant merely discloses that blown oils exist as fast-drying oil used for paints and varnishes. There is nothing in Grant that suggest their use as a reactive material used or form a transesterified polyol.

The law clearly states that if proposed modification (e.g., modifying the teachings of Croft to incorporate the blown oil from Grant) would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F. 2d 900, (Fed. Cir. 1984). MPEP § 2143.01(V). Here, the modification proposed by the Examiner of using a blown vegetable oil would render the Croft reference unsatisfactory for its intended purpose. The disclosure in Croft states that the intended purpose of the plasticizer is to be "essentially inert." Blown vegetable oil which contains hydroxyl groups that are reactive in a urethane system is not a component which could be added to the teachings of Croft to yield a product that is satisfactory for the intended purposes of Croft. The teachings of Croft are to make a polyurethane product which is to be used as a sealer or soft putty for filling in space between different elements. Accordingly, Applicants submit that the use of the blown oil containing functional hydroxyl OH⁻ groups go against the intended purpose of Croft, which calls for the incorporation of an oil to be a plasticizer that is "essentially inert." Thus, for at least the above reasons Applicants submit that the Examiner has not established a *prima facie* case of

obviousness based on Croft in view of Grant and Applicants request the rejection be withdrawn.

The Examining Attorney further states that claims 84, 85, 92, 93, 95, and 102-105 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Croft in view of Grant et al., as applied to claims 83, 86-91, 94, 97-101, and 106-108 above, and further in view of Trowell, U.S. Patent No. 4,720,571 (Office Action, p. 10). Specifically, the Examiner notes that Croft and Grant do not employ a transesterification/esterification catalyst, but asserts this is disclosed in Trowell, and is well known to the polyurethane foam forming art for their effect of converting ester group containing materials into isocyanate reactant materials. However, Applicants respectfully traverse the findings of the Examiner.

Again, the Croft reference employs a plasticizing system that is selected so as to be essentially inert with polyurethane reaction products. To that end, Croft teaches away from using the presently claimed blown vegetable oils that contain functional hydroxyl OH⁻ groups in place of its "essentially inert" plasticizer and further teaches away from using transesterified catalysts in the presence of heat of approximately 150°- 250°C as disclosed in Trowell. In fact, Croft does not reference any heating of the B-side mixture such that one can only assume that these preparations of the B-side component part are done at room temperature. The mixture of the A-side and B-side component parts as disclosed in Croft clearly lends itself to a urethane reaction only. Quite simply, there is no teaching or suggestion to transesterify a blown vegetable oil containing reactive hydroxyl groups with another polyol (by heating and/or the use of a transesterification catalyst) and use the resultant polyol as a B-side reactive polyol in a urethane system to form a material.

The Examiner cites *In re Aller*, 105 USPQ 233, for the proposition that discovering optimal or workable ranges involves only routine skill in the art. However, the court in *In re Yates* 663 F.2d 1054 (CCPA 1981) made it clear that *In re Aller* does not necessarily support such a broad proposition, stating that

The Solicitor, relying upon *In re Aller*, 42 C.C.P.A. 824, 220 F.2d 454, 105 U.S.P.O. 233 (1955), argues that it is 'not unobvious to discover optimum or workable ranges by routine

experimentation.' In many instances, this may be true. The problem, however, with such 'rules of patentability' (and the ever-lengthening list of exceptions which they engender) is that they tend to becloud the ultimate legal issue-obviousness-and exalt the formal exercise of squeezing new factual situations into preestablished pigeonholes. Additionally, the emphasis upon routine experimentation is contrary to the last sentence of section 103.

Id. at n4. In *Aller*, the prior art showed essentially the same process as recited in the claims, and the prior art suggested the possibility of changing parameters of that process. In contrast, the prior art relied upon by the Examiner in the present case does not even recognize transesterification of a blown vegetable oil or a reactive functional component. Moreover, the range of vegetable oil of Croft relied upon is for the amount of plasticizer, which is obviously a result-effective variable.

With respect to the combination of references suggested by the Examiner, the MPEP sets forth that the standard for obviousness requires that there must be some suggestion, either in the reference or the relevant art, of how to modify what is disclosed to arrive at the claimed invention. MPEP § 2143. The combination of prior art references must have been "obvious to a person with ordinary skill in the art." KSR Int'l Co. v. Teleflex, Inc. et al., 127 S. Ct. 1727 (2007). To be *prima facie* obvious, there must be an apparent reason why a person of ordinary skill in the art would combine the references, and that analysis should be made explicit. *Id.* Here, not only is there no reason to believe that using a transesterified polyol derived by transesterifying the blown vegetable oil with another polyol was obvious, there simply is no apparent reason to combine Croft with Grant and/or Trowell.

Accordingly, Applicants submit that the obviousness rejections under 35 U.S.C. § 103(a) is unfounded and should be withdrawn and claims 83-108 be allowed.

Conclusion

Applicants respectfully request entry of this Response, withdrawal of all bases for rejection, and allowance of claims 83-108. In the event there are any remaining formalities or

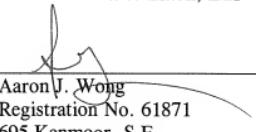
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other issues needing Applicants' assistance, Applicants request the Examiner to call the undersigned attorney at (616) 949-9610 should the claims not be in condition for allowance, Applicants would request an interview of the case.

Respectfully submitted,
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April 8, 2009

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Main Entry: **plas-ti-cizer**

Pronunciation: \plas-tē-,sī-zər\

Function: *noun*

Date: 1925

: one that **plasticizes**; *specifically*: a chemical added especially to rubbers and resins to impart flexibility, workability, or stretchability

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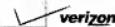
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